Please amend the present application as follows:

CLAIMS

Applicant resubmits previously presented claims 1-25 without amendments, however, the claims are reproduced below for the convenience of the Examiner.

1. (Original) A transceiver interface circuit configured to transmit and receive information, the circuit further configured to perform echo-cancellation, comprising:

a digital signal processor (DSP) configured to digitally process information from a data source and to generate a transmit signal, the DSP further configured to receive and process a receive signal and a transmit error signal;

an analog front end (AFE) coupled with the DSP, the AFE configured to modify the transmit signal, the receive signal, and the transmit error signal;

a line driver coupled with the AFE, the line driver configured to amplify the modified transmit signal and to produce the transmit error signal; and

a hybrid network coupled with the line driver and the AFE, the hybrid network configured to transmit, via a transmission line, the amplified transmit signal output from the line driver and to forward the receive signal received from the transmission line to the AFE, the hybrid network further configured to isolate the amplified transmit signal from the receive signal.

2. (Original) The circuit of claim 1, wherein the DSP is further configured to error compensate the receive signal by means of the transmit error signal.

3. (Original) The circuit of claim 2, wherein the error compensated receive signal comprises a reduced transmit signal component.

4. (Original) The circuit of claim 1, wherein the AFE further comprises:

a digital to analog converter configured to convert the transmit signal from digital to analog;

at least one filter to further prepare the transmit signal for transmission;

at least one filter to further process the receive signal from transmission;

a first analog to digital converter configured to convert the receive signal from analog to digital; and

a second analog to digital converter configured to convert the transmit error signal from analog to digital.

5. (Original) The circuit of claim 1, wherein the line driver further comprises:

a differential amplifier being configured to produce an amplified output signal from two common mode input signals; and

a virtual ground wherein the transmit error signal is measured from.

6. (Original) The circuit of claim 5, wherein the differential amplifier is an inverting differential amplifier.

7. (Original) The circuit of claim 5, wherein the virtual ground is between inputs of the amplifier.

8. (Original) The interface circuit of claim 1, wherein the transmit error signal contains the non-linear error of the transmit signal.

9. (Original) A transceiver interface circuit comprising:

means for digitally processing information from a data source and transmitting the information via a transmit signal, the digital signal processing means receiving and digitally processing a receive signal and a transmit error signal;

means for converting an analog signal into a digital signal and converting a digital signal into an analog signal;

means for amplifying the transmit signal for transmission via a transmission line, the amplification means producing a transmit error signal generated by the amplification of the transmit signal; and

means for isolating the transmit signal from a receive signal received via a transmission.

10. (Original) The circuit of claim 9, further comprising:

means for subtracting the transmit error signal from the receive signal to produce an error compensated receive signal.

11. (Original) The circuit of claim 9, wherein the amplification means further comprises:

a differential amplifier configured to produce an amplified output signal from two common mode input signals; and

a virtual ground wherein the transmit error signal is measured from.

12. (Original) The circuit of claim 11, wherein the differential amplifier is an inverting differential amplifier.

13. (Original) The circuit of claim 11, wherein the virtual ground is between inputs of the amplifier.

14. (Original) The circuit of claim 9, wherein the transmit error signal contains the non-linear error of the transmit signal.

15. (Original) A system for performing echo cancellation, comprising:

a digital signal processor (DSP) configured to digitally process information from a data source and to transmit the information via a transmit signal, the DSP further configured to receive and digitally process a transmit error signal; and

a line driver in communication with the DSP via an analog front end (AFE) and configured to amplify the transmit signal and to produce the transmit error signal that is delivered to the DSP via the AFE.

16. (Original) The system of claim 15, further comprising:

a hybrid network coupled with the line driver and the AFE, configured to transmit, via a transmission line, the amplified transmit signal output from the line driver and to output a receive signal received from the transmission line to the AFE, the hybrid network further configured to isolate the amplified transit signal from the receive signal.

17. (Original) The system of claim 16, wherein the DSP is further configured to subtract the transmit error signal from the receive signal by an echo canceler, resulting in a clean received signal without echo.

18. (Original) The system of claim 16, wherein the AFE further comprises:

a digital to analog converter configured to convert the transmit signal from digital to analog;

at least one filter to further prepare the transmit signal for transmission;

at least one filter to further process the receive signal from transmission;

a first analog to digital converter configured to convert the receive signal from analog to digital; and

a second analog to digital converter configured to convert the transmit error signal from analog to digital.

19. (Original) The system of claim 15, wherein the line driver further comprises:

a differential amplifier being configured to produce an amplified output signal from two common mode input signals; and

a virtual ground wherein the transmit error signal is measured from.

20. (Original) The system of claim 19, wherein the differential amplifier is an inverting differential amplifier.

21. (Original) The system of claim 19, wherein the virtual ground is between inputs of the amplifier.

22. (Original) The system of claim 15, wherein the transmit error signal contains the non-linear error of the transmit signal.

23. (Original) A method for performing echo cancellation, the method comprising the steps of:

amplifying a transmit signal for transmission;

sensing a transmit error signal generated by amplification of the transmit signal;

receiving a receive signal, the receive signal comprising a combination of at least a remotely generated signal and the transmit error signal; and

error compensating the receive signal by means of the transmit error signal.

24. (Original) The method of claim 23, further comprising:

measuring the transmit error signal across a virtual ground, wherein the virtual ground is between inputs of the amplification means.

25. (Original) The method of claim 23, wherein the transmit error signal contains the non-linear error of the transmit signal.